

Editor
MALCOLM S. M. WATTS, M.D.

•
Associate Editor
LLOYD H. SMITH, JR., M.D.

•
Assistant to the Editor
ROBERT F. EDWARDS
For information on preparation of
manuscript, see advertising page 2

Policy Committee—Editorial Board

JOHN G. MORRISON, M.D., San Leandro
MALCOLM C. TODD, M.D., Long Beach
WILLIAM F. QUINN, M.D., Los Angeles
JOSEPH F. BOYLE, M.D., Los Angeles
ALBERT G. MILLER, M.D., San Mateo
HELEN B. WEYRAUCH, M.D.,
San Francisco
MALCOLM S. M. WATTS, M.D.,
San Francisco

**California
Medicine**



EDITORIAL

A Great Editor

THE NEW editors of CALIFORNIA MEDICINE have a distinct feeling of having suddenly stepped into the very large shoes and been called upon to don the mantle of a man whose breadth of shoulder and very considerable stature have become apparent to all the readers of this journal. Dwight L. Wilbur served conscientiously and ably as Editor for twenty-one and a half years. During that time the journal has moved from one which largely reflected, in visual form, what went on at the annual sessions of the California Medical Association to one which has developed many and varied sources of manuscripts. Under Dr. Wilbur's steady hand it has consistently grown, not only in size and circulation but in the sophistication and quality of content. It has taken its place among the foremost and most widely read of state medical journals.

Dr. Wilbur did not leave CALIFORNIA MEDICINE without expressing his vision of its future. He observed that the number of excellent medical schools in California and in the West is growing. He noted that the California Medical Association has become a leader in the socio-economics of medicine and in developing new relationships with government. He believes that CALIFORNIA MEDICINE should reflect these activities of the present and future and that it should grow in prestige and

value as it does so. He envisions first a regional and then a national medical journal of increasing stature which will reflect great credit upon the California Medical Association and the medical profession of California.

CALIFORNIA MEDICINE, along with the California Medical Association, is proud to contribute its great editor to even greater service to his profession and his fellow man at the national level. His successors, between them, will try somehow to fill his very large shoes and then, if the metaphor be not too incredible, climb upon his very broad shoulders and add something further to the stature of his *arbeit* of two decades and more.

Choriocarcinoma, a Landmark In Cancer Chemotherapy

THE DEVELOPMENT of effective means of therapy for disseminated cancer has proved to be one of the most complex and difficult tasks in all of medicine. The article by Johnson, Jacobs and Silliphant in this issue of CALIFORNIA MEDICINE, on the treatment of choriocarcinoma and related trophoblastic neoplasms of the uterus, underscores and extends our knowledge of the most successful application thus far of cancer chemotherapy in man. Choriocarcinoma has remained for over a decade² as the only disseminated neoplasm in adults where intensive chemotherapy can induce

remissions in most patients as well as cures in a sizable proportion of those treated. The dramatic clinical responses are the result of collaborative efforts by tumor biologists, endocrinologists and clinical investigators interested in deciphering the puzzle of trophoblastic tumors.

The observations of occasional spontaneous complete remissions of choriocarcinoma as well as the relative sensitivity of this neoplasm to a whole host of chemotherapeutic agents of differing classes — antimetabolites, antibiotics, alkylating agents and plant alkaloids — distinguish it from all other human neoplasms. In view of the origin of choriocarcinoma from the placenta, which is derived from both parents, it is possible that certain factors of host resistance directed against transplantation antigens may also play a role in the oncolysis associated with chemotherapy.

Precise quantitation of those products of tumor cell metabolism which can serve as biologic indicators of occult neoplastic mass has proved to be of considerable importance to clinicians. The synthesis of gonadotropins is normally restricted to the pituitary and the placenta. Human tumors which have trophoblastic elements — choriocarcinomas, teratomas, and embryonal-cell carcinomas — are the most frequent neoplasms which can produce gonadotropins, although gonadotropic activity has also been found in four instances of bronchogenic carcinoma¹ and several of hepatoma.⁴ Quantitation of human chorionic gonadotropin (HCG), initially by bioassay and recently by more sensitive immunoassay, has not only aided in diagnosis and staging of trophoblastic tumors but has provided guidelines for clinicians as to the relative efficacy of chemotherapy, and to the duration of therapy required to attain a probable cure in patients with responsive neoplasms.

Other disseminated neoplasms regularly elaborate metabolic products which can be precisely measured; for example, the paraproteins of multiple myeloma, steroid hormones by adrenal, ovarian and testicular neoplasms, acid phosphatase by prostatic carcinoma, and lysozyme in monocytic leukemia.³ In these tumors, drug-induced remissions can also be monitored by falling levels of the secretory product; however, the product usually remains detectable albeit at reduced levels, and cures have yet to be observed with present forms of therapy. It can be anticipated that the list of human neoplasms which are found to regularly elaborate products that can be quantified, will

grow progressively. As additional forms of therapy become available to oncologists, studies of tumor products will undoubtedly play a central role more frequently in diagnosis, staging and "therapeutic titration." The concept of prolonged total suppression of tumor product secretion by chemotherapy — a concept which appears to be justified in choriocarcinoma — may well prove applicable in other forms of disseminated cancer.

REFERENCES

1. Fusco, F. D., and Rosen, S. W.: Gonadotropin-producing anaplastic large-cell carcinomas of the lung, *New Eng. J. Med.*, 275:507-515, 1966.
2. Li, M. C., Hertz, R., and Spencer, D. B.: Effect of methotrexate therapy on choriocarcinoma and choriodenoma, *Proc. Soc. Exper. Biol. Med.*, 93:361-366, 1956.
3. Osserman, E. F., and Lawlor, D. P.: Serum and urinary lysozyme (muramidase) in monocytic and monocytic leukemia, *J. Exp. Med.*, 124:921-928, 1966.
4. Reeves, R. L., Tesluk, H., and Harrison, C. E.: Precocious puberty associated with hepatoma, *J. Clin. Endocr.*, 19:1651-1660, 1959.

A Third Force

RECENT EVENTS in the Medi-Cal program have focused attention on two separate value systems in health care. One system, which might be called humanitarian, is grounded in the premise that everyone is entitled to all the health care he needs and that the best of what modern medicine has to offer should be readily available to him when he needs it. The other, which might be called economic, recognizes that there will probably always be insufficient health care resources to meet this demand, and seeks to identify and make the most efficient use of what can be made available. Each of these value systems appears to have strong support from the public and there seems to be a general public expectation that somehow the aims of both will be accomplished.

Recent events suggest that if either of these value systems is neglected, public opinion will rally to its support. Indeed, proposals of severe restrictions in the Medi-Cal program evoked a hue and cry in support of humanitarian values; and at almost the same time widely publicized allegations of over-use and overcharging led to clear warnings